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LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-44. (Cancelled)

45. (Presently Amended) An optical probe system comprising:

an optical probe to be inserted into a body cavity;

a light source that generates lights which is irradiated to an object;

a high-magnification observation unit incorporated in the distal section of the optical probe;

an image digitization unit that digitizes a luminance signal produced by the high-magnification observation unit;

an image parameter sampling unit that samples an image parameter from an image;

an optimization parameter calculation unit that calculates an optimization parameter on the basis of the image parameter;

an image optimization unit that optimizes an image according to the optimization parameter;

an image display device on which an optimized image is displayed;

a digital image preservation unit in which a digital image is preserved;

a display/preservation selection device that is used to select or designate display/preservation parameters, which determine displaying and preserving an image, on the image display device, and wherein the display/preservation parameters include at least one of:

a parameter concerning a display/preservation mode in which at least a specific image is displayed and/or preserved;

a parameter concerning a reference for selection based on which an image to be displayed on the image display device, that is, an object of display and/or

preservation is specified;

a parameter concerning simultaneously preserved data, that is, data other than an image that should be preserved together with an image displayed on the image display device;

a parameter concerning timing of preservation, that is, at what timing an image displayed on the image display device should be preserved; and

a parameter concerning blur correction, that is, whether a blur in an image displayed on the image display device should be corrected; and

a control device that controls any one of the light source, image display device, and digital image preservation unit on the basis of the display/preservation parameters, and executed display and preservation;

~~An optical scanning probe system according to Claim 43, wherein the display/preservation selection device is used to select or designate the reference for selection from among:~~

~~a luminance value represented by a luminance signal sampled by the high-magnification observation unit;~~

~~an area that is defined within an image range produced by the high-magnification observation unit;~~

~~a frame image that specifies a certain number of frame images from among time-sequentially consecutive frame images; and~~

~~a time during which a specific frame image out of time-sequentially consecutive frame images is displayed or preserved.~~

46. (Original) An optical scanning probe system according to Claim 45, wherein the control device controls the image display device and digital image preservation unit so that an image whose luminance value is equal to or larger than a predetermined luminance

value will be displayed and/or preserved; and

an image whose luminance value falls below the predetermined luminance value is not displayed and/or preserved.

47. (Original) An optical scanning probe system according to Claim 46, wherein the control device controls the image display device and digital image preservation unit so that:

when the reference for selection is set to the luminance value, an image whose luminance value is equal to or larger than the predetermined luminance value and which depicts an object in a size equal to or larger than a predetermined size will be displayed and/or preserved; and

an image whose luminance value falls below the predetermined luminance value and which depicts an object in a size falling below the predetermined size will not be displayed and/or preserved.

48. (Original) An optical scanning probe system according to Claim 46, wherein when the reference for selection is set to the luminance value, the display/preservation selection device can be used to set the predetermined luminance value to any value.

49. (Original) An optical scanning probe system according to Claim 46, wherein when the reference for selection is set to the luminance value, the display/preservation selection device can be used to set the predetermined luminance value and predetermined object size to any values.

50. (Original) An optical scanning probe system according to Claim 45, wherein the control device controls the image display device and digital image preservation unit so that when the reference for selection is set to the area, a predetermined area alone will be

displayed and/or preserved but the other area will not be displayed and/or preserved.

51. (Original) An optical scanning probe system according to Claim 50, wherein when the reference for selection is set to the area, the display/preservation selection device can be used to set the predetermined area to any area.

52. (Original) An optical scanning probe system according to Claim 45, wherein when the reference for selection is set to the frame image, the control device controls the image display device and digital image preservation unit so that a predetermined frame image alone will be displayed and/or preserved but the other frame images will not be displayed and/or preserved.

53. (Original) An optical scanning probe system according to Claim 52, wherein when the reference for selection is set to the time, the display/preservation selection device can be used to set the predetermined frame image to any frame image.

54. (Original) An optical scanning probe system according to Claim 45, wherein when the reference for selection is set to the time, the control device controls the image display device and digital image preservation unit so that display and/or preservation is performed during a predetermined time but not performed during the other time.

55. (Original) An optical scanning probe system according to Claim 54, wherein when the reference for selection is set to the time, the display/preservation selection device can be used to set the predetermined time to any time.

56. (Presently Amended) An optical probe system comprising:

an optical probe to be inserted into a body cavity;

a light source that generates light which is irradiated to an object;

a high-magnification observation unit incorporated in the distal section of the optical probe;

an image digitization unit that digitizes a luminance signal produced by the high-magnification observation unit;

an image parameter sampling unit that samples an image parameter from an image;

an optimization parameter calculation unit that calculates an optimization parameter on the basis of the image parameter;

an image optimization unit that optimizes an image according to the optimization parameter;

an image display device on which an optimized image is displayed;

a digital image preservation unit in which a digital image is preserved;

a display/preservation selection device that is used to select or designate display/preservation parameters, which determine displaying and preserving an image, on the image display device, and wherein the display/preservation parameters include at least one of:

a parameter concerning a display/preservation mode in which at least a specific image is displayed and/or preserved;

a parameter concerning a reference for selection based on which an image to be displayed on the image display device, that is, an object of display and/or preservation is specified;

a parameter concerning simultaneously preserved data, that is, data other than an image that should be preserved together with an image displayed on the image display device;

a parameter concerning timing of preservation, that is, at what timing an image displayed on the image display device should be preserved; and

a parameter concerning blur correction, that is, whether a blur in an image displayed on the image display device should be corrected; and
a control device that controls any one of the light source, image display device, and digital image preservation unit on the basis of the display/preservation parameters, and executes display and preservation;

~~An optical scanning probe system according to Claim 43, wherein the~~
display/preservation selection device can be used to select or designate the simultaneously preserved data from at least one and more among a normal endoscopic image, a scale, any text, and any cursor.

57. (Presently Amended) An optical probe system comprising:
an optical probe to be inserted into a body cavity;
a light source that generates light which is irradiated to an object;
a high-magnification observation unit incorporated in the distal section of the optical probe;
an image digitization unit that digitizes a luminance signal produced by the high-magnification observation unit;
an image parameter sampling unit that samples an image parameter from an image;
an optimization parameter calculation unit that calculates an optimization parameter on the basis of the image parameter;
an image optimization unit that optimizes an image according to the optimization parameter;
an image display device on which an optimized image is displayed;
a digital image preservation unit in which a digital image is preserved;
a display/preservation selection device that is used to select or designate display/preservation parameters, which determine display and preserving an image, on the

image display device, and wherein the display/preservation parameters include at least one of:

a parameter concerning a display/preservation mode in which at least a specific image is displayed and/or preserved;

a parameter concerning a reference for selection based on which an image to be displayed on the image display device, that is, an object of display and/or preservation is specified;

a parameter concerning simultaneously preserved data, that is, data other than an image that should be preserved together with an image displayed on the image display device;

a parameter concerning timing of preservation, that is, at what timing an image displayed on the image display device should be preserved; and

a parameter concerning blur correction, that is whether a blur in an image displayed on the image display device should be corrected; and

a control device that controls any one of the light source, image display device, and digital image preservation unit on the basis of the display/preservation parameters, and executes display and preservation;

~~An optical scanning probe system according to Claim 43,~~ wherein the display/preservation selection device can be used to select or designate the timing of preservation from among:

the timing of starting and/or stopping observation which is determined by the control device;

the timing of displaying a still image or the timing before or after the display;

the timing of starting and/or stopping emission of light from the light source which is determined by the control device; and

the timing of executing and/or canceling blur correction which is determined by the control device.

58. (Presently Amended) An optical probe system comprising:
an optical probe to be inserted into a body cavity;
a light source that generates light which is irradiated to an object;
a high-magnification observation unit incorporated in the distal section of the optical probe;
an image digitization unit that digitizes a luminance signal produced by the high-magnification observation unit;
an image parameter sampling unit that samples an image parameter from an image;
an optimization parameter calculation unit that calculates an optimization parameter on the basis of the image parameter;
an image optimization unit that optimizes an image according to the optimization parameter;
an image display device on which an optimized image is displayed;
a digital image preservation unit in which a digital image is preserved;
a display/preservation selection device that is used to select or designate display/preservation parameters, which determine displaying and preserving an image, on the image display device, and wherein the display/preservation parameters include at least one of:
a parameter concerning a display/preservation mode in which at least a specific image is displayed and/or preserved;
a parameter concerning a reference for selection based on which an image to be displayed on the image display device, that is, an object of display and/or preservation is specified;
a parameter concerning simultaneously preserved data, that is, data other than an image that should be preserved together with an image displayed on the image display device;

a parameter concerning timing of preservation, that is, at what timing an image displayed on the image display device should be preserved; and

a parameter concerning blur correction, that is, whether a blur in an image displayed on the image display device should be corrected; and

a control device that controls any one of the light source, image display device, and digital image preservation unit on the basis of the display/preservation parameters, and executes display and preservation;

~~An optical scanning probe system according to Claim 43, wherein the display/preservation selection device can be used to designate execution or cancellation of blur correction.~~

59-74. (Cancelled)